FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST 6167
WEYERHAEUSER RAYMOND LUMBER MILL

SUMMARY

August 2006

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INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST 6167. The Department of Ecology (Department) is proposing to issue this permit, which will allow discharge of wastewater to city of Raymond wastewater treatment plant. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 Washington Administrative Code [WAC]).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A- Public Involvement Information.

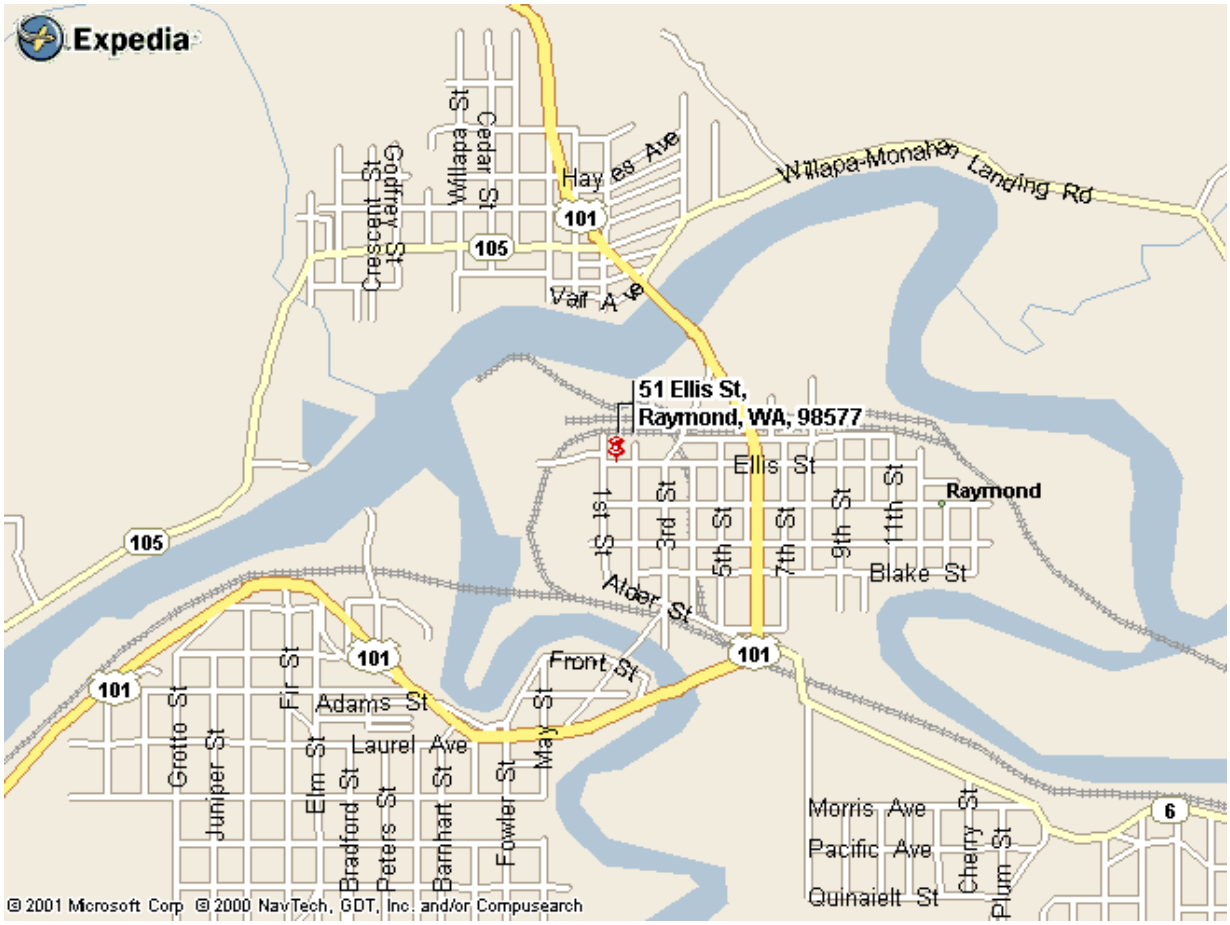
The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix D- Response to Comments.

GENERAL INFORMATION	
Applicant	Weyerhaeuser
Facility Name and Address	Raymond Lumber Mill 51 Ellis Street Raymond, WA 98577
Type of Facility:	Lumber mill and planing mill with kiln drying
Facility Discharge Location	Latitude: 46° 41' 20" N Longitude: 123° 44' 07" W
Treatment Plant Receiving Discharge	City of Raymond Wastewater Treatment Plant
Contact at Facility	Connie Hamilton, Safety/Environmental Coordinator Telephone #: 360-942-6340
Responsible Official	Lois Nadolny, General Manager 51 Ellis Street Raymond, WA 98577 Telephone #: 360-942-2442 Fax #: 360-942-6313

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

The Weyerhaeuser Raymond Lumber Mill is an Industrial User that generates waste waters subject to Code of Federal Regulations (CFR) Title 40, Part 429, Subpart K – Sawmills and Planning Mills Subcategory and Subpart L – Finishing Subcategory. Subpart L prohibits the direct discharge of process wastewater pollutants into navigable water. Therefore, kiln free water must be sent to the POTW for treatment prior to dhischarge. Subparts K and L have no numerical pretreatment limits and states that both new and existing sources must comply with 40 CFR Part 403, the general pretreatment limitations.



HISTORY

Weyerhaeuser's Raymond Lumber Mill is an existing facility located beside the Willapa River in the town of Raymond. Weyerhaeuser is currently permitted to discharge boiler blowdown, sand filter backwash water, and kiln free water to the city of Raymond Wastewater Treatment Facility. Their first permit was issued in 1997. Prior to 1997, process wastewaters were discharged directly into the Willapa River. Since 1997, all process wastewater is required to be discharged to the city of Raymond Publicly Owned Treatment Works (POTW). On December 4, 1997, the Department terminated the Weyerhaeuser Raymond Truck Wash Permit No. WA0039250 at Weyerhaeuser's request because all process wastewater discharges authorized by the referenced NPDES permit had been permanently eliminated.

During the 2002 permit cycle, Weyerhaeuser designed and built a new outfall system, replacing two existing but leaking manholes. The new manhole contains an effluent pump, activated by level sensors. An inline magnetic flowmeter on the outfall line now measures the flow rate. This system replaces the previous gravity system, featuring a DataGator flowmeter that did not reliably measure Weyerhaeuser's effluent flow rate. The new system was activated in March 2006, and is expected to generate more accurate flow measurement than existed previously.

INDUSTRIAL PROCESSES

Weyerhaeuser's Raymond Lumber Mill produces commodity lumber products, from 2x4's to 2x10's, exclusively from Western Hemlock SIC 2421. Activities include log handling, sawmilling, drying, planing, shipping, powerhouse operation, and equipment maintenance. The 2005 application lists raw materials as 82,229 thousand board feet of hemlock logs. From these logs, the mill produced 183,852 thousand board feet of kiln dried lumber, 86,383 tons of green chips, and 45,232 tons of green sawdust. In 2005, production was 187,793 thousand board feet of kiln dried lumber. This represents an increase of nearly 30 percent from 1998, when Weyerhaeuser reported the production of 144,839 million board feet of lumber at Raymond.

The facility employs about 180 workers and currently operates two 10-hour shifts Monday through Thursday, and one 13 hour shift on Friday, Saturday, and Sunday. The mill typically shuts down two weeks a year for annual maintenance.

Industrial wastewater sources listed in the 2005 application include boiler blowdown, sand filter backwash, kiln free water, and truck cleaning wash water.

TREATMENT PROCESSES

Wastewater is not treated onsite prior to discharge to the POTW, other than incidental pH and temperature adjustment due to mixing of the wastewater streams.

PERMIT STATUS

The Department issued this permit on January 23, 2002, and it became effective March 1, 2002. Weyerhaeuser appealed this permit on February 15, 2002, (PCHB NO. 02-025), citing, in part: unreasonable and inappropriate monitoring requirements for BOD and TSS; special condition S10, the Compliance Schedule for Monitoring Equipment Installation was inappropriate and unreasonable, and did not allow enough time; and "the cost to comply with these requirements is needlessly great...".

The appeal was complicated by the pending submittal of an engineering report. By state law, Weyerhaeuser was required to submit an engineering report to evaluate and recommend the best location for the outfall and to identify and recommend the most appropriate flow monitoring and sampling equipment. Weyerhaeuser believed the best location for the new equipment was at a manhole on First Street. Based on Weyerhaeuser's assurance and a desire to settle the appeal, the Department signed Joint Stipulation Regarding Settlement and Order Dismissing Appeal for PCHB NO. 02-025, on June 6th, 2002. The settlement made the following changes to the permit. First, the monitoring frequency for oil & grease and ammonia were reduced from once per week to twice per month and temperature from once per week to once per month (BOD and TSS remain the same). Second, elements 3 & 4 of S10 were now required to be completed 60 and 90 days, respectively, from the date the engineering report was approved.

Weyerhaeuser submitted an engineering report on May 1, 2002, but the Department returned it as fundamentally deficient. This incomplete report concluded that the best location for the flow meter and composite sampler was at a manhole on First Street (proposed Outfall 003). After The Department rejected the engineering report, Weyerhaeuser procured the services of an outside engineering firm. The Department granted Weyerhaeuser's request for a time extension and a new engineering report was submitted on June 12, 2002. The Department found that this submittal met regulatory requirements and was approved on July 2, 2002. However, this second engineering report concluded that the best location for the new equipment was the existing Outfall 002 location on plant property. Therefore, the Department had a conflict: the legal obligation to modify the permit as required by the settlement order, and Weyerhaeuser's request to use the location recommended in their approved engineering report. To correct this conflict, a second order was drafted and signed on July 12, 2002. This order amended the first order, and allowed the Department to modify the permit the way Weyerhaeuser wanted it. The Department reflected these changes in the September 3, 2002, modification.

The June 2002 Engineering report assumed the DataGator was the preferred flow meter. Weyerhaeuser had purchased this meter and begun preliminary testing in April 1999. However, this meter never operated as designed. The accuracy was questionable and not verifiable. Eventually, the Department and Weyerhaeuser jointly concluded that it did not meet necessary requirements.

To solve the flow meter problem, the Department issued an order to Weyerhaeuser. Corrective Action Item #1 of Order 1745 dated November 17, 2004, (associated with Penalty No. 1744- see next section), required Weyerhaeuser to submit an approvable engineering report for an acceptable flow meter within 30 days of receipt. The Department received a draft engineering report for flow meter options on December 29, 2004. This document discussed five options for flow monitoring. The preferred alternative was to upgrade and inspect the existing DataGator meter and allow time to determine if it could be a viable option. After an inspection and servicing with the vendor, all parties eventually agreed that the DataGator was unable to provide the ability to verify accuracy of flow measurement. Weyerhaeuser then proposed a sixth option, a gravity system that measured flow via a magnetic flowmeter. However, the Department noted that the flow rates through the proposed flow meter were substantially below the recommended flow rate. Therefore, reasonably accurate flow measurement might not be possible. After more meetings and phone calls, a new option was proposed, with wastewater pumped from a new wet well, and flow measured on the discharge side via a magnetic flowmeter. This was a variation of alternative #6, and was thereafter called option #6. After discussions and minor revisions, this option was deemed approvable. The final version of the August 2005, engineering report was received by the Department November 4, 2005, and approved November 9, 2005. The new system was installed and became operational March 14, 2006.

Weyerhaeuser submitted a request for permit modification on July 25, 2002, to increase the acceptable pH range from 5.5-8.5 to 5.5-10.0. This request could not be addressed in the September 2002, modification due to the time frame imposed by the Joint Stipulation Regarding Settlement and Order Dismissing Appeal for PCHB NO. 02-025. the Department modified the permit with the requested limits. Also, following the requirements of the Department's permit writer's manual, the modified permit required the installation of a continuous pH meter. However, Weyerhaeuser objected because it would cost too much and would probably create permit violations. Weyerhaeuser retracted their modification request and the Department did not issue the modified permit.

An application for permit renewal was submitted to the Department on January 3, 2005, and accepted by the Department on May 18, 2005.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on April 6, 2006. A compliance inspection with sampling was conducted September 5, 2003. The Department also conducted site inspections November 14, 2002, (flow meter issues), April 15, 2003, (EPA multi-media inspection), and January 5, 2005, (draft engineering report).

During the history of the previous permit, the Permittee has not remained in complete compliance with permit requirement, as summarized below:
Penalties:

- Penalty No. DE 02WQSR-3978, April 22, 2002, $2000 for hot water discharge to Willapa River.

- Penalty No. 1744, November 17, 2004 for $49,000 (reduced to $39,000, and settled for $25,000: $6,000 to the Department and $19,000 to the Middle Creek Salmon Restoration Project): failure to properly monitor flow rate; failure to notify the Department of permit non-compliance; pH violations and incorrect averaging; and stormwater permit violations. Companion order No. 1745 required engineering report to evaluate flow meters, immediate notification of noncompliance, stop pH averaging, and address stormwater issues.

pH: June 2002, 9.42
July 2002, 9.16
August 2002, 9.25
September 2003, 5.09 & 5.11 (during onsite inspection 9/5/03)
November 2003: pH 5.15

Data Gator flow meter didn't provide continuous monitoring, intermittently from April 2002, until it was replaced March 2006.

O&G: exceedances in February, April, July, August, September, and October 2005, and January 2006.

Weyerhaeuser experienced exceedances of their oil and grease limits in February, April, July, August, September, and October 2005, and January 2006. In October 2005, Weyerhaeuser requested that the Department issue a compliance order to Weyerhaeuser, to study the cause and to find appropriate corrective actions. The Department issued Order No. 2915 in November. Weyerhaeuser submitted a study plan November 10, 2005, which the Department approved November 23, 2005. From this investigation, Weyerhaeuser concluded that the high residues were not from spilled sources within the plant, but from biological growth with the sampling manhole. This residue was disturbed during sampling and picked up into the oil and grease sampling container. Weyerhaeuser has taken several steps that might help this issue. The new pumped outfall manhole and sampling arrangement should also help, by providing a deeper, better mixed, and more representative sample. On May 4, 2006, Weyerhaeuser requested an alternative oil and grease analytical method, which will not quantify wood fatty acids and esters from lumber production, but will quantify petroleum-based products. The Department approved this request and will grant permission to use the alternative method.

Also, an unauthorized discharged was discovered during the EPA multi-media inspection in April 2003. Untreated vehicle wash water was discharged to ground and/or surface water from the vehicle wash station. This process wastewater discharge is not authorized by Permit No. ST 6167.

Weyerhaeuser's 2002 permit requires BOD, TSS, and ammonia samples to be collected as 24-hour flow proportional composites. The newly installed flow meter does not synchronize with the composite sampler to collect flow proportional samples. This requirement will be included in the proposed permit.

WASTEWATER CHARACTERIZATION

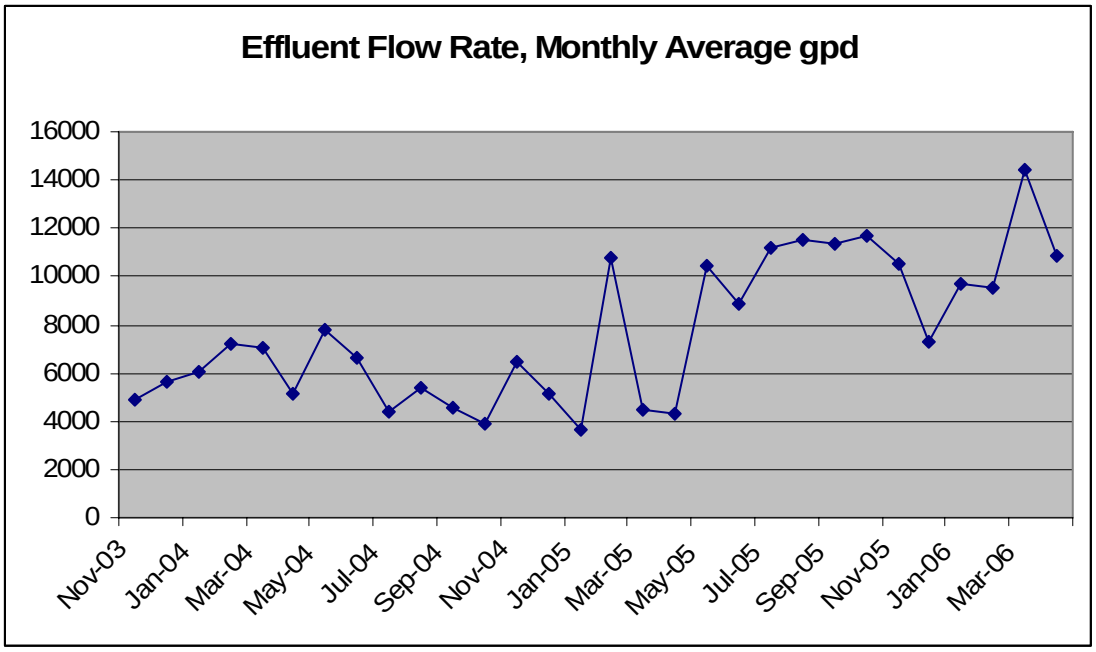
The concentration of pollutants in the discharge was reported in the permit application and in discharge monitoring reports. The proposed wastewater discharge is characterized for the following parameters:

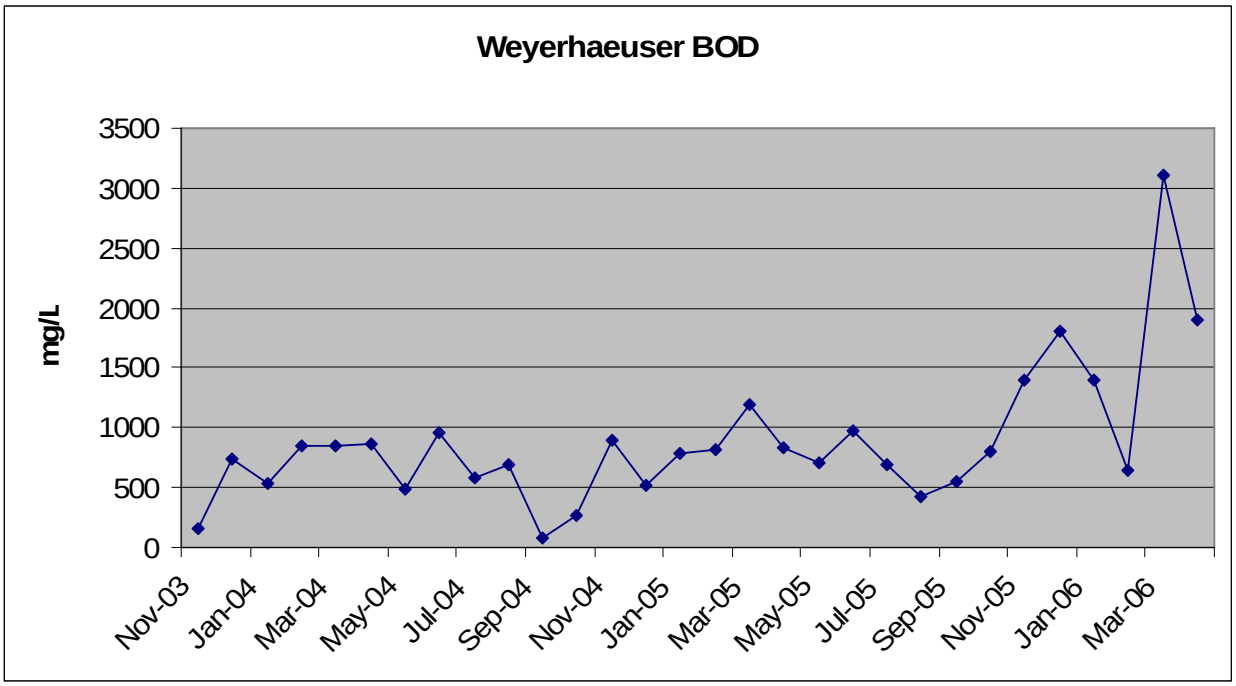
Table 1: Data from application

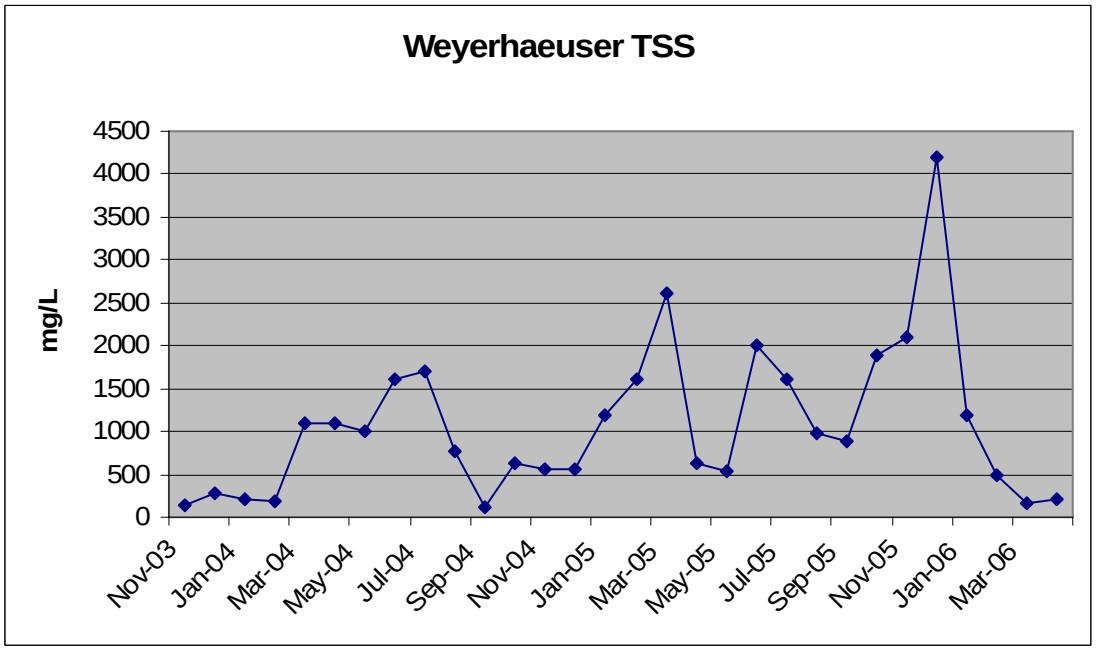
Parameter	Concentration: minimum, maximum, and average (mg/L)
BOD	39, 960, 408
TSS	40, 1700, 466
Ammonia-N	<0.05, 21, 9.2
pH	5.0, 8.5, 6.9
Oil & grease	<5.0, 90.8, 23 (excludes permit limit exceedances)

Table 2: Data from Monthly Reports- 11/2003 thru 03/2006

Parameter	Concentration: minimum, maximum, and average (mg/L)
BOD	81, 3100, 847
TSS	110, 4200, 1105
Ammonia-N	3, 17, 10.6
pH	Minimum 5.12, maximum 8.5
Oil & grease	<5.0, 547, 75 (includes permit limit exceedances)







The three previous figures indicate data from November 2003, through April 2006. The first figure, Effluent Flow Rate, show data points that represent the monthly averages listed in Weyerhaeuser's monthly reports. Figures 2 and 3, BOD and TSS, indicate the maximum value per month.

From data currently available, Weyerhaeuser's potential contribution to the City of Raymond POTW could be as high as 49 percent and 59 percent of the POTW's permitted influent limit for TSS and BOD, respectively. See Appendix C for details.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not interfere with the operation of the POTW.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). Existing federal categorical limitations for this facility are found under 40 CFR Part 403, General Pretreatment Regulations for Existing and New Sources of Pollution:

Parameter	Minimum	Maximum
pH	5.0	N/A
Temperature at the POTW	N/A	104 degrees F.

AKART for this wastewater should include pH neutralization. Therefore, the Department will address effluent pH from two standpoints: neutralization and monitoring. See discussions that follow.

EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

In order to protect the city of Raymond Wastewater Treatment Plant from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, limitations for certain parameters are necessary. These limitations are based on local limits established by the city of Raymond and codified in ordinance. Applicable limits for this discharge are as follows:

City of Raymond Local Limits:

Parameter	Effluent Limitations
Temperature	150 degrees F.
Oil and Grease	100 mg/L
pH	5.5--8.5 standard units
BOD	300 mg/L

Pollutant concentrations in the proposed discharge with technology-based controls in place will not cause interference, pass-through or hazardous exposure to POTW workers nor will it result in unacceptable pollutant levels in the POTW's sludge.

As compared to the federal limits, the city of Raymond's pH and temperature standards are more conservative, and so they will be retained. The limit of 150 degrees F. at the point of discharge on Weyerhaeuser property should be protective of the 104 degree limit at the POTW due to the extended travel time to the POTW. The oil and grease limit will be retained also.

In previous permits, Weyerhaeuser has not been held to the local limit of 300 mg/L for BOD. The Department concludes that these limits are applicable, but does not propose to implement them into the permit. If imposed, this limit would cause substantial compliance problems- Weyerhaeuser would probably need to add an onsite treatment process to remove BOD, and then dispose of the solid waste residue.

Typically, the Department does not impose BOD and TSS concentration limits to high strength wastes if (1) the POTW can easily treat and assimilate the hydraulic and organic loading and (2) the POTW is adequately compensated for their treatment costs, so that the public does not subsidize the industry. The city of Raymond has a formula for assessing extra fees to high strength waste streams, to cover the city's cost to treat Weyerhaeuser's wastewater. Therefore, the Department will not impose the 300 mg/L BOD limit.

The city of Raymond's sewer ordinances have been in place since 1992. The Department encourages the City to review these ordinances, including cost recovery, and update them, if deemed appropriate.

Due to federal NPDES program requirements, the city of Raymond POTW has begun evaluating upgrade options. The city and regional planning process will benefit from Weyerhaeuser's recent ability to better quantify and characterize their wastewater loadings, due to their upgraded flow measurement and sampling system. The city of Raymond could also use this opportunity to make decisions on POTW capacity issues, such as loading allocation for local industries. Such allocations could include specific BOD and TSS loading limits for Weyerhaeuser. If local loading limits are passed into ordinance or another official manner, the Department would likely add them as permit requirements.

COMPARISON OF LIMITATIONS WITH THE EXISTING PERMIT ISSUED JANUARY 23, 2002 AND MODIFIED SEPTEMBER 3, 2002

Parameter	Existing Limits	Proposed Limits
Flow, gpd (daily max/average monthly)	30,000/20,000	30,000/20,000
Oil & grease, mg/L	100	100
pH, standard units	Between 5.5 and 8.5	Between 5.5 and 10.5
Temperature, ^{o}F	150	150

The Department is proposing to expand Weyerhaeuser's allowable pH range. This increase is based on a comprehensive approach to Weyerhaeuser's pH issues. During the course of the 2002 permit, the variability and potential for a wide range of pH was well documented. In 2002, Weyerhaeuser requested an increased pH range, citing, in part, an acknowledgement of probable higher and lower effluent pH. . The Department concludes that:

- The pH of Weyerhaeuser's wastewater can be either acidic (below 5.0) or caustic (above 10.5).
- The effluent consists of a highly variable ratio of the two primary waste streams (low pH kiln free water and high pH boiler blowdown): thus the effluent pH can vary greatly.
- A primary tenet of the NPDES program is that monitoring frequency must be adequate to assure compliance with limits. Continuous pH monitoring is the only means of assuring compliance under highly variable conditions.

Because of this variability, the Department is proposing to require the installation of a continuous pH monitor. This requirement is in accordance with guidelines outlined in the Department's permit writer's manual.

The Department is proposing a one-year time frame for installation of the continuous pH monitor. This extended time frame will allow Weyerhaeuser time to gather data and engineer a system, if needed, to remain in compliance with the limits after the continuous monitoring commences.

The proposed increased range, by itself, should reduce the potential for pH violations. Also, the allowance to discharge higher pH wastewater could benefit the Raymond POTW. A pH range between 5.5 and 10.5 should be protective of Raymond's sewer collection system.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110). The approved point of monitoring is at the wastewater collection manhole containing the new submersible pump, designated as Outfall 002. This manhole contains the sampling probe for the automatic composite sampler.

The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

In the 2002 permit, Weyerhaeuser monitored and reported ammonia to better characterize the loading to the city's treatment plant. The data indicated moderate and fairly consistent levels of ammonia. Since ammonia remains a constituent of concern for the POTW, the Department is proposing to continue ammonia monitoring at the reduced frequency of once per month.

On May 5, 2006, the Department received a request from Weyerhaeuser for permission to use an alternative oil and grease analytical method. The letter provided justification and a summary of actions taken to address the issue and fulfill the requirements of the Department's Compliance Order No. 2915. The Department studied the issue and concludes that the alternate method proposed, NWTPH-Dx, is acceptable. This method detects petroleum-based products but should not quantify compounds associated with wood products. This approach is expected to be fully protective of the POTW.

The Department is proposing to require continuous pH monitoring, as discussed in the prior section.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110 and 40 CFR 403.12 (e),(g), and (h)).

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S.4. as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment. The proposed permit requires submission of an updated O&M manual for the wastewater monitoring and flow measurement system.

PROHIBITED DISCHARGES

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

DILUTION PROHIBITED

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and Revised Code of Washington (RCW) 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

SLUG DISCHARGE CONTROL PLAN

The Department has determined that the Permittee has the potential for a batch discharge or a spill that could adversely affect the POTW. The Permittee has developed a slug discharge control plan. Therefore, an update to this plan is required (40 CFR 403.8 (f)).

COMPLIANCE SCHEDULE

The draft permit contains two requirements under Special Condition S.9. Compliance Schedule. First, Weyerhaeuser shall design and install necessary equipment to allow collection of flow proportional samples. This is a requirement of the 2002 permit and will continue to be a requirement. When the outfall was re-designed, this feature was overlooked. Second, Weyerhaeuser shall design and install a continuous pH monitor. The effluent pH range and variability at this facility have been an ongoing concern, as discussed in the previous section titled Permit Status. Adherence with the pH limits cannot be reasonable assessed without continuous pH monitoring.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Condition G7 relate to permit renewal and transfer. Condition G8 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G9 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G10 requires the payment of permit fees. Condition G11 describes the penalties for violating permit conditions.

PUBLIC NOTIFICATION OF NONCOMPLIANCE

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued for 5 years.

REFERENCES FOR TEXT AND APPENDICES

Washington State Department of Ecology.

Laws and Regulations (http://www.ecy.wa.gov/laws-rules/index.html)

Permit and Wastewater Related Information
(http://www.ecy.wa.gov/programs/wq/wastewater/index.html)

Water Quality Program Permit Writer's Manual (http://www.ecy.wa.gov/pubs/92109.pdf)

APPENDICES

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on June 22, 2005, and June 29, 2005, in The *Chinook Observer* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on (date) in The Chinook Observer to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Industrial Unit Permit Coordinator
Department of Ecology
Southwest Region- Water Quality
PO Box 47775
Olympia, WA 98504-7775

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the 30 day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least 30 days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within 30 days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone (360) 407-6286 or by writing to the address listed above.

This permit was written by Don Reif, Environmental Engineer.

APPENDIX B—GLOSSARY

Ammonia—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of the collection or treatment facility.

Categorical Pretreatment Standards—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity—Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring –Uninterrupted, unless otherwise noted in the permit.

Engineering Report—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample—A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial User—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Interference— A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal and;

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local Limits—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Pass-through— A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7.0 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Potential Significant Industrial User--A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

a. Exceeds 0.5 percent of treatment plant design capacity criteria and discharges <25,000 gallons per day or;

b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU)--

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug Discharge—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids—That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C—TECHNICAL CALCULATIONS

According to the city of Raymond Wastewater Treatment NPDES Permit No. WA0023329, the POTW design capacity and permitted limit for influent BOD loading is 1,780 and 1,100 pounds per day, respectively. The permitted limit for influent TSS loading is 1,780 pounds. Historical loading from Weyerhaeuser is difficult to assess due to lack of confidence in flow estimation. With approximately 1.5 months of data from the new flow meter (March 14 through April 2006), the daily maximum flow recorded was greater than 27,000 gpd, with several days in excess of 20,000 gallons.

Therefore, using a high daily flow rate estimate of 25,000 gallons and the highest concentrations recorded in the data period above (4,200 mg/L TSS and 3,100 mg/L BOD), Weyerhaeuser's potential contributions to the Raymond POTW are as follows: TSS=876 ppd, which is 49 percent of the POTW permit limit; BOD = 646 ppd, or 36 percent of design capacity and 59 percent of permit limit. This scenario is not known to have occurred. They represent a reasonable potential only: this scenario would only occur if the highest concentrations and above-average flows occurred on the same day.

TSS: 4,200 mg/L (December 2005) x 8.34 x 0.025 MGD = 876 pounds TSS

Percent of Raymond POTW permit limit: 876/1,780 = 49 percent

BOD: 3,100 mg/L (March 2006) x 8.34 x 0.025 MGD = 646 pounds BOD

Percent of Raymond POTW design capacity: 646/1,780 = 36 percent

Percent of Raymond POTW permit limit: 646/1,100 = 59 percent

APPENDIX D—RESPONSE TO COMMENTS